

City of Salina

Curbside Recycling Pilot Program Report



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Prepared by:
Aaron Klostermeyer
City Intern – Solid Waste Projects

CITY OF SALINA
CURBSIDE RECYCLING PILOT PROGRAM REPORT
2003

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Curbside Recycling Pilot Program Report

PURPOSE OF REPORT:

This report presents a preliminary plan for a possible City of Salina Curbside Recycling Pilot Program. The information found in this report is based on the best information available to the author up to the point of the report's distribution. While this plan is the basis of a feasible program, the events and specifics laid out herein are subject to change and revision as the pilot program process unfolds.

PURPOSE OF PILOT PROGRAM:

Whether the City of Salina should operate a curbside recycling program has been examined, questioned, and considered for years. Wisely, it has been treated carefully, thoroughly, and with some hesitation. If done correctly, curbside recycling has the potential to become an effective, positive program that would benefit the community. However, if done incorrectly, it could result in an expensive failure that leaves the citizens unsatisfied and jaded toward recycling in general. A curbside recycling pilot program would allow the City of Salina to test a collection system to see if it works before committing to it.

With a minimum of commitment and expense, the pilot program would provide a means to determine if this system is feasible, effective, and appreciated by the service users. The pilot program would be a one-year trial of a recycling system that the City could adopt for full-time use. The pilot would be designed to gather information about the realities of recycling, to gain experience with the equipment and daily operations, and to find ways to improve the program. Opinions, information, and ideas would be collected from the City staff involved with the program. Also, input would be sought from the processing facility's owner and employees, and citizens participating in the test. This would present the thoughts and perspectives of the parties involved with the recycling program. Using this pool of first-hand information, the decision by the City Commission to proceed with curbside recycling or to take another direction could be made with increased confidence.

PILOT PROGRAM DETAILS:

Program duration:

One Year

Items to be collected:

(Dependent upon truck purchased)

- Plastics #1-5
- Newspapers
- Magazines
- Mish Mosh (Mixed Paper)
- Aluminum Cans
- Steel Cans
- Glass

Together these materials account for more than just a token recycling program. Depending on an individual's participation, removing these materials from a household's trash should result in a significant decrease in its landfilled waste. However, the materials collected will depend on the configuration of the truck that is purchased.

Collection Method:

Items will be collected using a one-man, one-truck, curbsort system. Customers will group material inside their bins into 4 categories: Newspaper, Mish Mosh, Magazines, and Commingled Containers. One Sanitation employee, using one recycling truck, will collect all of the recyclables for the program.

Materials will be collected once per week, preferably on the participants' regular trash day. The actual routing will depend on the number and distribution of interested participants. Because of the size and nature of the recycling truck, all collections must be made at the curb. No recycling collection will take place in the alleys.

Participant Base:

Customer participation capacity has been set at a maximum of 1,000 households for the pilot program. Participants will be selected from interested City Sanitation customers throughout the city. Only citizens who have City of Salina refuse service would be eligible for the pilot program. Customers must also officially register their interest with the City to be considered as candidates for the pilot program.

The City should accept and record names above the 1,000 household limit for the pilot program, so that all interested citizens could be notified of future recycling opportunities, following the pilot program.

Fees:

No fees for curbside recycling will be charged to customers participating in the pilot program. However, in lieu of a fee, participants will provide feedback on their experience of the program. This and other data from the pilot program will be used in part to establish an appropriate recycling fee for the future, if the curbside recycling service is offered full-time.

Participant Responsibilities:

Participants will be asked to rinse out, group, and place out their recyclable material in the recycling bin for collection, according to the program guidelines. They also will be asked to provide feedback on their experiences in working with the program, to complete a survey at the end of the pilot, and possibly to answer other questions throughout the event.

OPERATIONAL DESIGN:***Incorporation into Sanitation Division:***

The recycling pilot program will be operated by the City Sanitation Division. One of the experienced Sanitation employees will operate the recycling truck and collect the recyclable material. He will receive a pay raise to Driver status for his increased responsibilities for the duration of the pilot program. A new full-time worker/driver will be hired to fill the resulting void in Sanitation. If curbside recycling does not continue past the pilot program, the new-hire will still be retained by the City of Salina as an employee. He may be transferred to an opening in another division, if need be, or the position may be eliminated as attrition occurs in the Sanitation Division.

Recycling will act as another piece of the unified whole in Sanitation. Similar to the present worker integration in refuse, grass routes, and special pickups, Sanitation workers will share duties as needed to get the job done, whatever it might be. Although every Sanitation worker may help with some aspects of recycling at one time or another, at least one other experienced employee should serve as a primary backup for the mainline recycling driver in case of illness, vacation, or other absence.

Recycling equipment, including the truck and extra bins, will be housed in Sanitation's existing garage space. Due to the shortage of room in the garage, an older refuse truck will be moved outside in order to make room for the recycling truck.

Recycling Bins:

Each participating household will be issued one 18-gallon plastic bin with a lid. (Additional recycling bins could be offered at an additional cost, in a permanent program.) Lids will be secured with a nylon cord to prevent them from being lost or blown away by the wind. Bins with lids are estimated at

\$10-11 each. Wheel kits are also available to make transporting the bins to the curb easier. Wheel kits cost approximately seven dollars (\$7.00) when purchased in bulk (100 or more).

It would be in keeping with the “no charge for participants” idea of the pilot program to offer wheel kits to elderly participants with physical difficulties at no charge. Costs would be seven hundred dollars for one hundred kits.

Material handling:

Participants will place their clean recyclable materials in their bin. Individuals would provide their own paper grocery bags to keep paper materials grouped and separated from the loose, commingled containers (see picture). The City recycling worker could easily pull out the grouped paper, then sort the mixed containers onto the truck. This approach keeps recycling simple and hassle-free for the customer, while reducing sort time for the collection worker.



If participants would prefer, they could substitute the paper bag with a hard plastic container (like a small trash can) approximately the same size as a grocery bag. Paper bags could be recycled with the mixed paper. Reusable plastic containers would be replaced in the participant’s recycling bin.

A note about customer service:

Given the City of Salina Sanitation Division’s commitment to taking care of their customers, the potential for recycling to pose some complications should be noted. While refuse collection can be fairly flexible about what items can be accepted, recycling must be more discerning about what is accepted on the routes. One of the advantages of a curbsort system is the ability to immediately remove contaminated materials from the recycling stream by leaving unacceptable material behind. This ensures a quality, recyclable product that is of value to recycling plants. This translates into good relations with buyers, which in turn means better money and a better safety net during hard times in the recycling markets.

Normally, in other recycling programs in other communities across Kansas and the nation, unacceptable material is left in the customer’s recycling bin, to be thrown away, preferably with a note explaining why the material is not recyclable. It is possible that some Salina citizens might object to this approach. Therein lies the complication.

The recommended way to address this situation is to follow the examples of other communities by providing copious public education on the realities of recycling and how to recycle correctly through the City of Salina program.

Provide each participant with recycling guidelines, and uphold those guidelines by refusing to collect material that does not meet the published standards. Upholding published standards may draw some negative reaction at first, but this will subside once people understand and adapt to the system.

To publish standards and not uphold them sends mixed signals, and could promote the use of recycling bins as just another trash container. Furthermore, it would reduce product quality, reducing its value and making it more difficult to find buyers. Or, it may simply result in good recyclables being landfilled because of too much contamination. The public response to the City's recycling program hauling loads to the landfill certainly would not be positive.

For these reasons, in addition to the voluntary nature of a subscription-based program, where unhappy participants have the option of simply discontinuing service, it is strongly recommended that the guidelines for acceptable materials in the curbside recycling program be observed and enforced to the extent possible.

Truck:

The pilot program should employ the same truck design as would be used in a permanent program. A recycling body with individual, trough-loaded, side dumping compartments is the choice for this program. The body would be mounted on a chassis with a low-entry, right-hand drive cab. The compartments can dump materials directly into containers, which can then be taken to balers via forklift. This truck design offers reduced fatigue and work-strain for the employee, and clean, separated material for processing.

Specifically, a Kann Trough (or comparable) loader body mounted on a chassis with right-hand drive and low-entry cab modification best suits the needs of this program.

There are three methods of obtaining a truck for this program:

1. Lease a truck
2. Buy a used truck
3. Buy a new truck

The method of acquiring a truck will ultimately affect how the program is operated. The configuration of a recycling truck determines what materials it can collect. Buying a new truck assures that the City of Salina will get the exact truck design that best suits this recycling program. Most used or leased trucks will be setup for different situations, and different combinations of materials. Therefore, if a used or leased truck is selected, some alterations to the proposed program will be necessary.

Lease:

Leasing offers the advantages of not owning a specialized truck that can be difficult to resell, should the City wish to pursue other directions for recycling after the pilot program. On the other hand, leasing is an expensive expenditure with no investment value- after a year of paying to use a truck, the City would then have to buy a truck to continue recycling after the pilot program ends.

Leasing opportunities are almost non-existent in this area, and prohibitively expensive where they can be found. It is not recommended that the City lease a truck for the pilot program.

Used:

The advantage of purchasing a used truck is the cost savings. The City could most likely purchase two used trucks for the price of one new truck. Assuming that two identical used trucks could be found, one would make an excellent backup truck. If curbside recycling was not pursued after the pilot program, the truck could be sold or used in other recycling events for a minimal loss. If recycling does continue, and the program is expanded, the used truck could be traded in towards the purchase of a new truck or trucks.

The disadvantages of used equipment are the increased risk of breakdowns, a reduced or no warranty, and the inability to customize the truck for the City's needs (instead the City must adjust its needs to the capabilities of the truck).

An investigation into used truck options in Kansas returned no promising leads. There are no cities in Kansas that operate the trough-loading style trucks best suited to this program. Operations in Nebraska are the nearest, and they have no known plans to put any trucks on the market. Based on the available selection at this time, it is not recommended that the City pursue a used truck.

New:

A new truck is recommended for the pilot program. Purchasing a new truck has several advantages. A new truck can be designed to fit the City's unique recycling needs. It is better to start with a truck that can accommodate all the materials that the City wants to recycle. That way, recycling is not as limited, and the pilot acts as a more accurate test of an effective recycling program. If the program expands in the future, the same design of trucks can be purchased again, making expansion simple.

Disadvantages of buying a new truck include higher cost, rapid depreciation, and a difficult resale market, should it come to selling the truck.

There are a number of dealers in the area from which a new truck, built to the City's specifications, can be obtained. A standard vehicle bidding process will allow the City to review bids on comparable trucks. The price range for a new

trough-loading truck is from approximately \$115,000 to \$130,000. From the day of purchase, the truck could take from 90 to 120 days to arrive.

Backup Vehicle:

In the event of a breakdown that requires lengthy repair, a backup collection vehicle must be available to collect recyclables. The least expensive option (in terms of equipment, at least) would be to use an existing City pickup with a trailer, and to secure large boxes or bins onto the trailer and in the truck bed to hold the material.

The City of Fargo, North Dakota operates a recycling program very similar to the one proposed here, with only one mainline recycling truck. Fargo also uses a pickup and trailer as a backup when their recycling truck is down.

The advantages of using existing equipment are no capital cost and no need for additional parking space. Disadvantages include reduced collection efficiency, possible interference with duties of other City of Salina crews, and difficulty in protecting material from wind and weather.

Processing:

Planning for the pilot program assumes that the City of Salina will partner with Images Recycling for the processing of materials. In recent discussions, Ken Reitz has stated a willingness to work with the City on this pilot program, and ideas for integrating the delivery of materials by the City's recycling truck with Images' processing facility are in process. Although preliminary discussions have taken place, the exact terms of an agreement between Images and the City of Salina regarding the pilot program have not been established. Nor has a definitive plan for handling delivery of materials to Images yet been secured at this time. However, both parties are confident that these issues can be resolved from the time of program approval to well before program implementation.

Some points of agreement can be reasonably expected. Images will provide information about the loads of material that the City delivers, as well as the operations of processing that material. In return, the City anticipates that, for the length of the pilot program, it will forego any revenue from payments that the City might otherwise receive from bringing recyclable materials to Images.

PUBLIC EDUCATION:

Public Education must be a high priority in any successful recycling program, and this proposed pilot program is no exception. It will be necessary to inform citizens about the importance of recycling, to give them a simple understanding of how recycling works and how it does not work, and to teach them the correct way to prepare their materials for recycling through the City of Salina curbside recycling program.

The usual methods of distributing public information are good venues for a public education campaign. Radio public service announcements, newspaper articles, and an informational flyer distributed in the water bill or on refuse carts are all good standards that should be used appropriately. In the case of a new program with the significance of a curbside recycling program, additional avenues should be considered, such as community meetings, presentations to clubs and organizations, recycling demonstrations, and developing a special program for Access Television. The more creative, interactive, and fun an educational media is, the more effective it will be.

PROGRAM STARTUP:

The path to the pilot program begins with its approval by the City Commission. Following Commission approval, a news release should inform the public of the upcoming pilot program, and should solicit interested City Sanitation customers to add their names and addresses to a sign up list. The signup list will be used to examine the scope and distribution of interested households for the purpose of determining which households to accept for the pilot program, and for designing the recycling collection routes. Community meetings could be held with the selected participants to inform them about their responsibilities in the program, and to teach them the recycling system they will be using.

Meanwhile, the bidding process should have begun for bins and a recycling truck. The fine details of integrating the material delivery system with Images should be worked out and any modifications to Images' facility should be made.

When the bins arrive, they should be prepared and assembled as possible. Sanitation employees should be trained in recycling procedures and how to identify contaminated or unacceptable material. When the truck arrives, the employees should be trained on its operation.

About two months before the start of collection, an awareness campaign should be launched to renew awareness of the pilot program and also provide some information about the benefits of recycling. The participants will receive additional instruction.

Finally, bins and informational pamphlets should be distributed to the participants, and collection should begin.

PROGRAM EVALUATION:

The program will be evaluated on all standpoints through surveys and comment forms submitted by Sanitation workers, Images personnel, and participating citizens.

Cost accounting, on items such as employee salaries and over-time, fuel, and equipment maintenance, will be used to calculate the program costs and will determine necessary revenues to fund ongoing service. Other operational data, such as collection stops per hour and the number of stops before the truck fills up, will be collected and recorded for use in determining how many customers can be served by one recycling truck. This data would also be useful for setting a threshold number for expansion, that is, the minimum number of customers that would need to be on a waiting list before program expansion would be considered.

POST-PILOT PROGRAM:

If the pilot program demonstrates that the City of Salina's curbside recycling service was a success, and that enough people are willing to pay the price to continue the service, the program should be continued as a full-time, subscription-based service.

An appropriate fee for the service would be derived from the information collected in the pilot program. Customers that sign up for recycling service and pay the fee would receive one 18 gallon bin, just as in the pilot program. Added amenities, such as additional bins or wheel kits could be purchased for a per-item fee.

A waiting list for recycling could be created, taking names of City of Salina Sanitation customers who would like to have recycling service. This would be similar to the waiting list that the City maintains for yard waste carts. Once the waiting list reaches a pre-determined number, such as 700 or 1000, the recycling service could expand to serve those customers, given the proper funds, resources, and approval. This managed growth approach balances the desires of the citizens with the resources of the City, and allows any expansion of the recycling program to be made with confidence.

Even if the recycling pilot program does not show favorable results, or if people are not willing to pay the necessary fee to continue the service, then the investment in the pilot program still is not wasted. Most importantly, the City would have decided the issue of a City-operated curbside recycling service. To recoup some of the capital investment, the truck could be rented or sold to other communities thinking about recycling programs, or it may be retained for several mobile, manned drop-off events around the city or even the county. School recycling events and demonstrations, monthly neighborhood drop-off programs, and combining recycling with Free Yard Waste Days are all possible uses for the recycling truck.

PROGRAM COSTS AND FINANCING:

The total program cost for this one year period is expected to be approximately \$190,000 made up of \$130,000 in vehicle capital costs and up to \$60,000 in operational costs. (See attached budget for details.)

The pilot program will be financed with City funds, through a combination of the Solid Waste Fund and Sanitation Fund monies. No Federal or State grants, nor any customer fees will be sought to support the pilot program.

OTHER CONSIDERATIONS:

If this pilot program is put into effect, it would not be the only curbside recycling experiment going on in Salina. Images Recycling has been conducting a curbside recycling test program in a twelve-block area of Salina. This program currently involves about 200 households. There has been some concern expressed by some members of the public that a City recycling program could have a negative impact on Images' curbside program.

Due to the limited scale of both Images' program, and the program proposed by the City of Salina, it is doubtful that either program will significantly impact the other in a negative way. In fact, the increased publicity of curbside recycling may help strengthen interest in both programs. Regardless, the presence of two differing curbside recycling systems with differing approaches, both operating concurrently in Salina, should provide an interesting comparison study.

ALTERNATE VIEWS:

A few individuals in the solid waste field have expressed the view that curbsort systems like the one proposed here are becoming obsolete, and that newer, better, more efficient systems could be used. The systems referred to are either a single stream system, where all materials are mixed together, or some variant on this idea. Such systems are not presently an option for the City of Salina, because either the infrastructure required for these systems is not present in the surrounding region, or because, in some cases, these systems and the necessary equipment do not yet exist in production. There is no telling just when these new systems may be feasible for Salina.

The proponents of this view suggest that the City should wait to begin a curbside program until this new age of recycling system becomes available to Salina. They suggest that it makes little sense to start a program that would soon become obsolete, which then should be changed over to a new system.

The concerns behind this outlook have a legitimate value, and should not be ignored. However, the curbside recycling pilot program proposed in this report (and a following full-time program, should one be modeled after the pilot)

addresses the root concerns of this viewpoint. The program's design allows for controlled growth and limited investment. It uses existing technology that is affordable and can be easily operated and maintained. There is no need to build a processing center or to haul material long distances to other communities for processing. The most expensive investment, the truck, is adaptable and offers a number of other uses, should it stop serving as a mainline curbside collection truck. These qualities make up an adaptable system that is capable of expanding, contracting, or changing as needed with minimal losses.

RECOMMENDATIONS:

The pilot program outlined here presents an excellent opportunity to learn about the realities of curbside recycling right here in Salina, Kansas, and to do so on a relatively risk-free basis. When viewed as a learning exercise, which will answer important community and policy questions, no matter what the outcome, there is no way that the pilot program can "fail."

Additionally, this system is a reasonable way to provide curbside recycling service at a reasonable cost to the citizens who want it, without burdening the citizens who don't. The program proposes to collect a significant amount of material, without straining the collection crew. It fills the time gap left by the transition between the systems of the present and those of the future, to address today's need while anticipating tomorrow's challenges.

For these reasons and more, it is highly recommended that this curbside recycling pilot program be approved for implementation by the City of Salina.

CURBSIDE RECYCLING PILOT PROGRAM PRELIMINARY COST ESTIMATES

Operating Cost (one year)

♦ Personnel Costs (wages, benefits, etc.)	\$30,000
♦ Vehicle Operations and Maintenance	\$ 5,000
♦ General Operating Supplies and Contractual	\$ 3,000
♦ Public Education and Communication	\$ 5,000
♦ Program Contingency	<u>\$ 5,000</u>
Sub-Total	<u>\$48,000</u>

Operating Equipment (one time expenses)

♦ Radio and Miscellaneous	\$ 1,000
♦ Containers, Lids and Wheel Kits	<u>\$11,000</u>
Sub-Total	<u>\$12,000</u>













Capital Equipment (one time)

♦ Recycling Collection Truck	<u>\$130,000</u>
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Source of Funds:

Solid Waste Fund	\$130,000
Sanitation Fund	\$60,000

CURBSIDE RECYCLING PILOT PROGRAM CRITICAL PATH

	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
Commission Approval									
Customer Selection									
Customer Training									
Equipment Bidding Process(Truck and Bins)									
Purchase and Receive Equipment									
Images Modifications									
Employee Training									
Bin assembly									
Public Awareness Program									
Bin Distribution									
Begin Routes									

CURBSIDE CONTAINERS

For Container Specifications click on picture

For Custom Imprinting Specifications click here



BC-2000
14.4 US Gallons
 US Patent #5,046,636

Specifications:

Outer Dimensions: 22.25" x 17.25" x 12.50"H

Container Volume: 14.4 US Gallons

Material: High Density Polyethylene

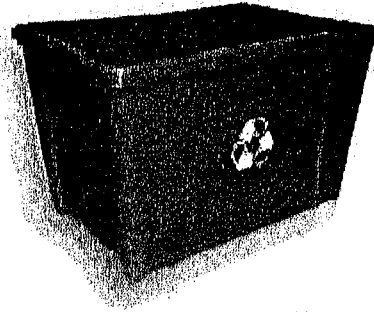
Nesting Ratio: 6:1

Shipping Weight: 3.75 lbs. (1.7 kgs)

Features:

The soft grip, full perimeter handle allows both collection employees and homeowners alike to grasp the 'Curbside Collector' naturally from corner to corner, thereby reducing back strain with unbalanced loads. The handle design also provides for extra support strength to the container and allows it to be grasped easily while wearing protective or winter gloves.

*Available with a divider insert



Universal US 18
18.7 US Gallons

Specifications:

Outer Dimensions: 16" x 23" x 14.25"H

Container Volume: 18.7 US Gallons

Material: High Density Polyethylene

Nesting Ratio: 9.5:1

Shipping Weight: 4.3 lbs. (1.95 kgs)

The Universal US 18 is the newest recycling container available. Busch Systems has used its 15 years of design experience to create a revolutionary new container which is light weight and whose strength is second to none. The reduced weight makes it easier on homeowners and collection employees, while helping to conserve our valuable natural resources.

Features:

*Universally Cross Stackable & Nestable
 —will cross stack and nest with all other recycling containers, making the US 18 fully compatible with any existing containers or any future containers.

*Great nesting ratio; minimizes storage space

*Bottom impact feet

*Utilizes SIR design for strength

